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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,142	07/23/2003	Peter Fuenfschilling	100-8345F	8284
1095	7590	03/03/2006	EXAMINER	
NOVARTIS CORPORATE INTELLECTUAL PROPERTY ONE HEALTH PLAZA 104/3 EAST HANOVER, NJ 07936-1080			MCKENZIE, THOMAS C	
			ART UNIT	PAPER NUMBER
			1624	

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,142

Applicant(s)

FUENFSCHILLING ET AL.

Examiner

Thomas McKenzie, Ph.D.

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-18 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-13 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 08/926,722.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/03, 9/03, 9/03 & 12</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to amendments filed on 12/27/05. Applicant has amended claims 11 and 17. Applicant has canceled claims 19-22. Claims 11-13 and 17 were previously rejected. Claims 12, 13, and 17 were designated as containing allowable subject matter. There are eight claims pending and four under consideration. Claims 11-13 and 17 are method of making claims. The application concerns purification of some rapamycin compounds and ascomycin compounds.

Response to Amendments and Arguments

2. Applicants' cancellation of the relevant claims renders moot the claim objection made in point #7, the indefiniteness rejection made in point #10, the art rejection over Gletsos (EP 652,219 A1) made in point #12, the art rejection over Chu ('595) made in point #13, the art rejection over Baumann (EP 427,680 A1) made in point #14, the art rejection over Cottens ('772) made in point #15, and the double patenting rejection made in point #16 of the previous office action.

Applicants point to Uchida (Inter. J. Mol. Med.) as evidence that the chemical arts consider FK506 to be an ascomycin compound. That evidence is found in the third and fourth sentences of the first paragraph on page 141. Additionally, No Author (Wikipedia, the free encyclopedia) defines ascomycin as, "an ethyl analog of FK506". It also lists both Tacrolimus (FK506) and

Pimecrolimus (33-epi-chloro-33-desoxyascomycin) as "related compounds" to the substance ascomycin. FK506 is considered in the chemical arts to be an ascomycin compound, in spite of stereochemical differences. Thus, the lack of antecedent basis rejection made in point #9 of the previous office action is withdrawn.

Applicants argue that Hauske ('060) teaches only purification of FK520 by counter current distribution using heptane:acetonitrile solvent mixtures as both the lighter and the heavier phases. Applicants' claims require the use of acetone, water, and/or isopropanol and do not claim use of acetonitrile. This is persuasive and the art rejection over Hauske ('060) made in point #11 of that action is withdrawn.

Election/Restrictions

3. Claims 14-16 and 18 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/10/05.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-13 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention. The phrase "rapamycin or a derivative thereof or ascomycin or a derivative thereof" is indefinite for two reasons. From the use of the word "derivative" it still appears that Applicants are intending to claim two genera of compounds but it remains unclear which compounds are the members of these two genera. Firstly, both rapamycin and ascomycin are specific compounds. How do the genera differ from these compounds? The fourth paragraph on page 3 merely lists these five compounds but does not describe the families. Is the scope of claim 11 limited to these five compounds or are there other compounds, which Applicants intend to purify?

Secondly, nowhere in the specification are directions given for preparing the any "derivative" of the compounds. A derivative is the result of a reaction upon an organic molecule. Since we do not know the reagents or the conditions of these reactions, there is no way of determining the structures of any claimed "derivative". The phrase "derivative thereof" is, in essence, a product by process claim. Yet Applicants have not described the intended processes sufficiently that we may understand the structures of the compounds they claim. Webster's New World Dictionary defines derivative as "a substance derived from ... another substance by chemical change", and "substitution of one or more elements or

radicals for one or more constituents of the original substance” has occurred. All definitions implying that new chemical bonds have formed.

The Examiner suggests naming the species for which Applicants are claiming purification.

Applicants have removed the "a" and "an" from the claims but have replaced them by "derivative thereof". Applicants point to lines 18-24, page 3 as listing which compounds they consider to be derivatives. This is not persuasive because the passage uses open language "[e]xamples of" so beyond the five compounds discussed above, there is no guidance as to which compounds are within the claimed genera.

Allowable Subject Matter

5. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 11, 12, and 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: Applicants process claims are patentable over Fleissner ('727), which teaches purification of by 21-ethyl-ascomycin and 27-ethyl-ascomycin by counter-current extraction on an industrial

scale in lines 26-42, column 3. However the 2002 effective filing date of this reference makes Fleissner ('727) an incompetent reference against Applicants' claims.


Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Information regarding the status of an application should be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system,

contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). Please direct general inquiries to the receptionist whose telephone number is (703) 308-1235.

8. Please direct any inquiry concerning this communication or earlier communications from the Examiner to Thomas C McKenzie, Ph. D. whose telephone number is (571) 272-0670. The FAX number for amendments is (571) 273-8300. The PTO presently encourages all applicants to communicate by FAX. The Examiner is available from 8:30 to 5:30, Monday through Friday. If attempts to reach the Examiner by telephone are unsuccessful, please contact James O. Wilson, acting SPE of Art Unit 1624, at (571)-272-0661.


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